

WHAT IS CLAIMED:

1. A catheter assembly for treating bifurcated vessels having a main vessel and a side branch vessel, comprising:
- an elongated catheter;
  - a tracking guide wire lumen for receiving a tracking guide wire, the tracking guide wire lumen extending through at least a portion of the catheter;
  - an integrated guide wire lumen for receiving an integrated guide wire, the integrated guide wire lumen extending through at least a portion of the catheter;
  - a tracking guide wire positionable within the tracking guide wire lumen;
  - an integrated guide wire positionable within the integrated guide wire lumen;
- and
- a retaining element for retaining the tracking guide wire and the integrated guide wire.
2. The catheter assembly of claim 1, wherein the retaining element has a clip for retaining a guide wire.
3. The catheter assembly of claim 1, wherein the tracking guide wire lumen is of the over-the-wire type.
4. The catheter assembly of claim 1, wherein the tracking guide wire lumen is of the rapid exchange type.
5. The catheter assembly of claim 4, wherein the tracking guide wire lumen is unzippable.

6. The catheter assembly of claim 1, wherein the integrated guide wire lumen is of the over-the-wire type.

7. The catheter assembly of claim 1, wherein the integrated guide wire lumen is of the rapid exchange type.

8. The catheter assembly of claim 7, wherein the integrated guide wire lumen is unzippable.

9. The catheter assembly of claim 1, wherein the integrated guide wire lumen extends from a proximal end through a distal end of the catheter.

Sub B17 10. A method of preparing a bifurcated vessel having a bifurcation, a main vessel, and a side branch vessel, for an interventional procedure, comprising the steps of:

providing an elongated catheter;

5 providing a tracking guide wire and tracking guide wire lumen for receiving the tracking guide wire, the tracking guide wire lumen extending through at least a portion of the catheter;

10 providing an integrated guide wire and integrated guide wire lumen for receiving the integrated guide wire, the integrated guide wire lumen extending through at least a portion of the catheter;

wherein the tracking guide wire lumen and the integrated guide wire lumen run substantially parallel to each other throughout their lengths, and the tracking

guide wire lumen and the integrated guide wire lumen do not move apart with respect to each other;

15                   back loading the tracking guide wire into the tracking guide wire lumen;

                  advancing the catheter over the tracking guide wire to a position proximal of the bifurcation in the main vessel;

                  advancing the integrated guide wire through the integrated guide wire  
20 lumen and into the side vessel branch;

                  removing the catheter from a patient's vasculature;

                  providing a retaining element for retaining the tracking guide wire and the integrated guide wire; and

                  maintaining the position of the tracking guide wire relative to the  
25 integrated guide wire with the retaining element.

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